

Notice of Allowability

Application No.

10/735,609

Examiner

Sangwoo Ahn

Applicant(s)

PONTE, JAY MICHAEL

Art Unit

2166

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 12/12/2003.
2. ☒ The allowed claim(s) is/are 37 - 40, 102 - 105.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date 20060918.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.



HOSAIN ALAM
SUPERVISORY PATENT EXAMINER

DETAILED ACTION

Claims 17 – 65 and 82 – 130 are pending.

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. David O'Neal on 9/18/2006.

The application has been amended as follows:

- Claims 17 - 36, 41 - 65, 82 - 102, and 106 – 130 have been canceled without prejudice.

- Rewrite claim 38 as follows:

"38. The method of claim 37, wherein the documents are Web pages."

- Rewrite claim 39 as follows:

"39. The method of claim 37, wherein the documents are Web sites."

- Rewrite claim 40 as follows:

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"40. The method of claim 37, wherein only terms desired to be found are contained in a search query, so that S_{Sub} is zero."

- Rewrite claim 102 as follows:

"102. A device for returning a list of a number of documents N in order of predicted utility, from among a collection of documents, as predicted by a search query containing terms to be present or absent, the device comprising:

(a) a processor;

(b) means for creating a compressed document surrogate for each document in the database, where the compressed document surrogate contains information about each term, from among the terms of interest in the database, which occurs in the document, and where the compressed document surrogate is created with top and remainder inverted term lists that contain information about the terms of interest in the database, and where the information about each term included in the compressed document surrogate for a document includes at least one of: the term identification number of the term, the location in a lookup table of an entry for the term, the number of times the term occurs in the document, the location in the document of each occurrence of the term, the address of the inverted term list of the term which contains the document, and the address of the location in the inverted term list of the document;

(c) means for choosing, from among the terms in the search query which are to be found in documents, the term whose top inverted term list has not yet considered, which occurs in the fewest documents in the collection;

(d) means for consulting the top inverted term list for said term, and calculating the score for each document found in the top inverted term list;

(i) means for assigning the document the calculated score, in response to the document not having previously been found on an inverted term list;

(ii) means for increasing the document's previously-calculated score by the calculated score, in response to the document having previously been found on an inverted term list;

(e) means for calculating a maximum score, S_{Max} , achieved by a document, not already found on a top inverted term list, in response to it being found on all top inverted term lists, for terms to be found in documents, not yet consulted;

(f) means for calculating a maximum score, S_{Sub} , to be subtracted from a document score, as a result of said document being found to contain terms to be absent from a document;

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(g) means for determining whether there are N or more documents already found, with scores such that if S_{Sub} were subtracted from their scores, the remainder would be greater than S_{Max} ;

(h) means for determining by use of the compressed document surrogate for each document a final score for the documents that have so far been found in any inverted term list of a desired term, and providing a list of the N documents with the highest scores, ranked in order of score, in response to there being N or more documents already found with scores such that if S_{Sub} were subtracted from their scores, the remainder would be greater than S_{Max} ;

(i) means for repeating (c) through (g) until either N or more such documents are found, or until no top inverted term list of a term desired to be found in the document has not been analyzed, in response to there not being N or more such documents;

(j) means for repeating (c) through (i) utilizing remainder inverted term lists instead of top inverted term lists, until either N or more such documents are found, or until no remainder inverted term lists of terms desired to be found in the document has not been analyzed, in response to there not being N or more such documents, and the top inverted term lists of all terms desired to be found in the document having been analyzed; and,

(k) means for determining by use of the compressed document surrogate for each document the final score for the documents found on the inverted term lists of the desired terms, and providing a list of the documents ranked in order of score."

As a result of the amendments above, the pending claims are 37 – 40 and 102 – 105.

Allowable Subject Matter

Claims 37 – 40 and 102 – 105 are allowed.

Claim 37 and 102 identify the distinct feature of returning a list of a number of documents N in order of predicted utility, comprising the steps (a) through (j), which are not entirely taught or suggested by the prior art of records. U.S. Patent Number 5,991,755 issued to Naohiko Noguchi et al, disclosing a document retrieval system in which a necessary document is retrieved with a high accuracy by ranking a plurality of documents, fails to suggest the claimed combination of steps as mentioned above. The above features in conjunction with all other limitations of the independent and dependent claims 37 – 40 and 102 – 105 are hereby allowed.

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Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sangwoo Ahn whose telephone number is (571) 272-5626. The examiner can normally be reached on M-F 10-6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hosain Alam can be reached on (571)272-3978. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Sangwoo Ahn
Patent Examiner
AU 2166

9/18/2006 SW


HOSAIN ALAM
SUPERVISORY PATENT EXAMINER